

DATE ISSUED: August 9, 2000

REPORT NO. 00-164

ATTENTION: Honorable Mayor and City Council
Docket of August 15, 2000

SUBJECT: Napa Street/Linda Vista Road Modern Roundabout

REFERENCE: *Napa Street Roundabouts Feasibility Study*, Leif Ourston, April 2000.
Copies available on City Administration Building, 5th Floor. Please
contact Maureen Spates at (619) 236-6621.

SUMMARY

Issues: Should the City Council: 1) Amend the FY 2001 Capital Improvement Program (CIP) to modify the scope of CIP Project No. 52-430.0, Napa Street - Linda Vista Road to Morena Boulevard, to include incorporation of a modern roundabout at the Napa Street/Linda Vista Road intersection, subject to interim design and environmental review to be funded and conducted as part of Phase I; 2) Amend the FY 2001 CIP to modify the title of CIP Project No. 52-430.0 from "Napa Street - Linda Vista Road to Morena Boulevard" to "Napa Street/Linda Vista Road Modern Roundabout"; 3) Direct the City Manager to identify possible Federal, State, or local sources of funding for the deficit of \$3.8 million for Phase II of the Napa Street/Linda Vista Road Modern Roundabout project; and 4) Authorize the increased appropriation of \$3.8 million to CIP Project No. 52-430.0, Napa Street/Linda Vista Road Modern Roundabout, contingent upon the City Manager obtaining new funding for this increase from Federal, State, or local sources?

Manager's Recommendations: 1) Amend the FY 2001 CIP to modify the scope of CIP Project No. 52-430.0, Napa Street - Linda Vista Road to Morena Boulevard, to include incorporation of a modern roundabout at the Napa Street/Linda Vista Road intersection, subject to interim design and environmental review to be funded and conducted as part of Phase I; 2) Amend the FY 2001 CIP to modify the title of CIP Project No. 52-430.0 from "Napa Street - Linda Vista Road to Morena Boulevard" to "Napa Street/Linda Vista Road Modern Roundabout"; 3) Direct the City Manager to identify possible Federal, State, or local sources of funding for the deficit of \$3.8 million for Phase II of the Napa Street/Linda Vista Road Modern Roundabout project; and 4) Authorize the increased appropriation of \$3.8 million to CIP Project No. 52-430.0, Napa Street/Linda Vista Road Modern Roundabout, contingent upon the City Manager obtaining new funding for this increase from Federal, State, or local sources.

Other Recommendations: On June 26, 2000 the Linda Vista Community Planning Group voted 12-1-1 to recommend approval of the modern roundabout project. On June 13, 2000 the Morena Shopping Quarter (Business Improvement District) Board voted 6-0 to recommend approval of the project.

Environmental Impact: This action is exempt from CEQA pursuant to the State CEQA Guidelines, Section 15262, "Feasibility and Planning Studies". Full environmental review will be conducted when the feasibility and planning studies are completed.

Fiscal Impact: Total project costs are estimated at \$5.4 million. Phase I costs, estimated

at \$610,000 - \$645,000 are within the \$1,595,740 current CIP appropriation. Phase II will not proceed until new Federal, State, or local funding is obtained for the remaining \$3.8 million.

BACKGROUND

Morena Boulevard and Linda Vista Road are the primary routes for vehicular access to the Morena Business District and the Linda Vista Community, respectively. Close to their junction they are connected by Napa Street. Shown on Attachment 1, Napa Street Aerial Photograph, these streets form a triangle with three closely-spaced signalized intersections. The intersection of Napa Street/Linda Vista Road operates at level of service F during the evening peak period. Implementation of the amended CIP will correct this deficiency.

Traffic volume through the intersection of Napa Street/Linda Vista Road is greater than 39,000 vehicles per day. During the evening peak period, the left-turn traffic on south-eastbound Napa Street at Linda Vista Road exceeds capacity resulting in a long queue of cars on Napa Street that backs into Morena Boulevard. The existing CIP project to address this congestion was among the original thirteen projects presented to San Diego voters in 1987 when they approved the TransNet half-penny sales tax transportation funding program (Proposition A).

The existing CIP project scope involves widening Napa Street from Morena Boulevard to Linda Vista Road. The community was not satisfied because the project would only improve the level of service from F to D. Over a four-year period beginning in February of 1996, and in collaboration with the community, the Transportation Planning Section of the Planning and Development Review Department evaluated alternative projects to relieve the congestion including adding turn lanes, street widening, street closure, and establishment of a one-way system. Fifteen alternatives listed on Attachment 2, Napa Street Transportation Alternatives, were studied and none would raise the level of service higher than D. Finally, as the sixteenth alternative, the intersection was studied for suitability for a modern roundabout.

In March of this year, the City hired a consultant, Leif Ourston of Ourston Roundabout Interchanges, to study the feasibility of implementing modern roundabouts to relieve the congestion. The consultant provided the preliminary design shown on Attachment 3, Napa Street/Linda Vista Road Modern Roundabout, and determined that a modern roundabout at this intersection would improve operations significantly.

DISCUSSION

What is a modern Roundabout?

A modern roundabout is a circular intersection wherein traffic circulates one-way around a central island. Modern roundabouts are different from conventional (non-conforming) traffic circles in that they have the a particular set of design guidelines that implement the following:

1. Yield at entry - Entering traffic yields to circulating traffic, therefore the circulating traffic is always moving.
2. Deflection - Entering traffic is aimed toward the center and then deflected around the central island, thereby decreasing traffic speed. This results in a reduction in the frequency and severity of accidents. Deflection also promotes the yielding process.
3. Flare - The upstream roadway is flared at entry to add lanes as needed. This provides high capacity in a compact space where capacity is needed most.

Modern roundabouts have been shown to provide dramatic increases in intersection capacity as compared to conventional cross intersections that are signalized. A recent study entitled *Crash Reductions Following Installation of Roundabouts in the United States* by the Insurance Institute for Highway Safety found a 39% reduction in accidents and a 76% reduction in injury accidents after conversions to modern roundabouts.

What is proposed?

The proposed Napa Street/Linda Vista Road modern roundabout project requires land acquisition from several adjacent property owners, including the Metropolitan Transit Development Board (MTDB) site south of the intersection which is planned for a mixed-use redevelopment project. The Redevelopment Agreement between the City and MTDB and the Disposition and Development Agreement between MTDB and their developer are on hold because the modern roundabout project would change the design of the redevelopment project. In addition to requiring land from the MTDB site, the roundabout project would allow partial street vacations of Napa Street and Linda Vista Road adjacent to the site such that the vacated land could be utilized for the redevelopment project. Attachment 4, Impacts to MTDB Site, shows approximate areas of land acquisition and street vacations related to the MTDB site.

To accommodate the redevelopment project, the modern roundabout project would be divided into two phases. Phase I would begin immediately and would consist of an alignment study for the entire roundabout, environmental review, and design and construction of an interim configuration for Napa Street and Linda Vista Road. (See Attachment 5, Phase I Interim Design.) Phase I would include the MTDB land acquisition and street vacations necessary for the redevelopment project to proceed. Phase I is estimated to cost \$610,000 - \$645,000 which is currently available in the CIP. Phase II would consist of the remaining land acquisition, and design and construction of the roundabout, when funding is obtained.

What improvements will result and what will this cost?

Based on the recently completed feasibility study by Leif Ourston of Ourston Roundabout Interchanges, a modern roundabout is proposed to replace the signalized intersection of Napa

Street/Linda Vista Road. The proposed roundabout would eliminate congestion by improving the intersection level of service from F to B during the evening peak period, and would provide level of service A operation at all other times of the day. The total cost for the project is estimated to be \$5.4 million, including approximately \$400,000 previously expended for engineering studies and alternatives analysis since the CIP was established in 1988. Phase I costs are within the \$1,595,740 current appropriation in the CIP. Phase II will not proceed until new Federal, State, or local funding is obtained for the remaining \$3.8 million.

Conclusion

In conclusion, staff recommends Council approve this action because implementation of the amended CIP will improve intersection operations from F to B during the evening peak period, and from as low as D to A during all other times of the day.

ALTERNATIVE

Do not approve the proposed modern roundabout. The existing CIP Project to widen Napa Street would only improve the Napa Street/Linda Vista Road intersection level of service from F to D. Land needed to accommodate the roundabout could be utilized by the redevelopment project, prohibiting future consideration of this alternative.

Fifteen other transportation improvement alternatives (Attachment 2) were studied previously. However, none would raise the level of service higher than D during the evening peak period.

Respectfully submitted,

Tina Christiansen, AIA
Planning and Development Review Director

Approved: George Loveland
Assistant City Manager

CHRISTIANSEN/TS/MPS

- Attachments:
1. Napa Street Aerial Photograph
 2. Napa Street Transportation Alternatives
 3. Napa Street/Linda Vista Road Modern Roundabout
 4. Napa Street/Linda Vista Road Modern Roundabout - Impact to MTDB Site
 5. Napa Street/Linda Vista Road Modern Roundabout - Phase I Interim Design

NOTE: The attachments are not available in electronic format. Attachments are available for review in the Office of the City Clerk.